

WHAT IS CLAIMED IS:

1. An on-vehicle DSRC apparatus employed for a dedicated short-range communication in an intelligent transport system, comprising:

a radio unit for performing communication with an on-road radio equipment installed at a location associated with a road;

a data processing unit for processing data received from said radio unit;

a battery for supplying an electric power to said radio unit and said data processing unit; and

a first power switch inserted in a power supply line extending between said battery on one hand and said radio unit and said data processing unit on the other hand,

wherein said first power switch is imparted with a function for effectuating a power save for control for the power supply from said battery so that electric energy of said battery can be saved.

2. An on-vehicle DSRC apparatus according to claim 1, further comprising:

a first timer for driving intermittently said first power switch,

wherein said first power switch is designed to intermittently supply the electric power to said radio unit and said data processing unit from said battery.

3. An on-vehicle DSRC apparatus according to claim 2, further comprising:

a first switch control unit provided in association with said first timer for controlling said first power switch,

wherein said first switch control unit is so designed as to control said first power switch such that said first power switch is changed over between a continuous power supply mode and the intermittently driven mode via said first timer in response to an output signal of said data processing unit.

4. An on-vehicle DSRC apparatus according to claim 1,
further comprising:
an electric field intensity detecting circuit for
detecting a field intensity of radio wave transmitted from said
on-road radio equipment; and
an activating circuit for activating said first power
switch when a detection output of said electric field intensity
detecting circuit becomes higher than a predetermined level
inclusive thereof.
5. An on-vehicle DSRC apparatus according to claim 4,
further comprising:
a second power switch inserted in a power supply line
extending between said battery and said electric field intensity
detecting circuit for controlling the power supply to said electric
field intensity detecting circuit from said battery; and
a second timer for intermittently driving said second
power switch.
6. An on-vehicle DSRC apparatus according to claim 5,
further comprising:
a second switch control unit for controlling the power
supply through said second power switch and interruption thereof
in response to an output signal of said data processing unit.
7. An on-vehicle DSRC apparatus according to claim 6,
further comprising:
a third timer for delaying starting of the power supply
through of said second power switch in response to an output signal
issued from said second switch control unit.
8. An on-vehicle DSRC apparatus according to claim 1,
further comprising:
a third power switch provided on output side of said
battery.
9. An on-vehicle DSRC apparatus according to claim 8,

further comprising:

a manipulation unit for manually turning on/off said third power switch.

10. An on-vehicle DSRC apparatus according to claim 8, further comprising:
a vibration detecting switch control unit for turning on/off said third power switch,

wherein said vibration detecting switch control unit is so designed as to turn off said third power switch when vibration of a level lower than a predetermined level is detected while turning on said third power switch upon detection of the vibration of a level higher than said predetermined level inclusive.

11. An on-vehicle DSRC apparatus according to claim 1, further comprising:
a voltage lowering detection unit provided on the output side of said battery; and

message means for issuing a message that said battery is in a voltage-lowered state when said voltage lowering detection unit detects a source voltage which is lower than a predetermined level inclusive which corresponds to a low voltage.

12. An on-vehicle DSRC apparatus according to claim 1, further comprising:
a solar battery provided on the output side of said battery,

wherein said battery is so designed as to be capable of being electrically charged.

13. An on-vehicle DSRC apparatus according to claim 1, further comprising:
an external power source connecting terminal unit provided on the output side of said battery,

wherein said external power source connecting terminal unit is so structured as to allow the power supply from an external power source.

14. An on-vehicle DSRC apparatus according to claim 1,
further comprising:
a connector provided on the output side of said battery,
wherein said connector is so structured as to allow said
battery to be removable.